IN THE CLAIMS

Please amend Claims 5, 6, 11, 12, and 15 as follows:

1. (previously presented) A method of determining a first motion vector and a second motion vector for a first macroblock and a second macroblock, respectively, of a present image from a previous image, the method comprising:

selecting a predetermined pattern of pixels in the previous image;

computing a first-macroblock difference measure for each of a first plurality of pixel blocks in the previous image to form a plurality of first-macroblock difference measures for the first macroblock using the predetermined pattern of pixels;

selecting a first origin block from the first plurality of pixel blocks having a lowest first-macroblock difference measure;

computing the first motion vector using the first origin block and the first macroblock;

computing a second-macroblock difference measure for each of a second plurality of pixel blocks in the previous image to form a plurality of second-macroblock difference measures for the second macroblock using the predetermined pattern of pixels;

selecting a second origin block from the second plurality of pixel blocks having a lowest second-macroblock difference measure; and

computing the second motion vector using the second origin block and the second macroblock.

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SN:09/842,201

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- 2. (original) The method of Claim 1, wherein the predetermined pattern of pixels includes less than or equal to half of the pixels in the previous image.
- 3. (original) The method of Claim 1, wherein the predetermined pattern of pixels includes a fourth of the pixels of the previous image.
- 4. (original) The method of Claim 1, wherein the ycoordinate modulo four of each pixel in the predetermined
 pattern of pixels has a y-coordinate is equal to three or zero.
- 5. (currently amended) The method of Claim 1, wherein computing a first-macroblock difference measure for each of a first plurality of pixel blocks in the previous image to form a plurality of first-macroblock difference measures for the first macroblock using the predetermined pattern of pixels further comprises:

computing an absolute difference between each pixel in both the pixel block and the predetermined pattern with a corresponding pixel in the first macroblock to create a plurality of absolute differences; and

summing the plurality of absolute differences to compute the difference measure.

6. (currently amended) The method of Claim 1, wherein computing a first-macroblock difference measure for each of a first plurality of pixel blocks in the previous image to form a plurality of first-macroblock difference measures for the first macroblock using the predetermined pattern of pixels further comprises:

computing a squared difference between each pixel in both the pixel block and the predetermined pattern with a corresponding pixel in the first macroblock to create a plurality of squared differences; and

summing the plurality of squared differences to

7. (previously presented) A method of determining a first motion vector and a second motion vector for a first macroblock and a second macroblock, respectively, of a present image from a previous image, the method comprising:

selecting a predetermined pattern of pixels in the previous image;

selecting a subpattern of pixels from the predetermined pattern of pixels;

computing a first first-macroblock difference measure for each of a first plurality of first-macroblock pixel blocks in the previous image to form a plurality of first first-macroblock difference measures using the subpattern of pixels;

selecting a first closest first-macroblock matching pixel block from the first plurality of first-macroblock pixel blocks having a lowest first first-macroblock difference measure;

computing a first accurate first-macroblock difference measure for the first closest first-macroblock matching pixel block using the predetermined pattern of pixels;

computing a first second-macroblock difference measure for each of a first plurality of second-macroblock pixel blocks in the previous image to form a plurality of first

second-macroblock difference measures using the subpattern of pixels;

selecting a first closest second-macroblock matching pixel block from the first plurality of second-macroblock pixel blocks having a lowest first second-macroblock difference measure; and

computing a first accurate second-macroblock difference measure for the first closest second-macroblock matching pixel block using the predetermined pattern of pixels.

- 8. (original) The method of Claim 7, wherein the predetermined pattern of pixels includes a fourth of the pixels of the previous image.
- 9. (original) The method of Claim 7, wherein the y-coordinate modulo four of each pixel in the predetermined pattern of pixels has a y-coordinate is equal to three or zero.
- 10. (original) The method of Claim 7, wherein the subpattern of pixels includes a fourth of the pixels of the predetermined pattern.
- 11. (currently amended) The method of Claim 7, wherein computing a first first-macroblock difference measure for each of a first plurality of first-macroblock pixel blocks in the previous image to form a plurality of first first-macroblock difference measures using the subpattern of pixels comprises:

computing an absolute difference between each pixel in both the first-macroblock pixel block and the subpattern with a corresponding pixel in the first macroblock to create a plurality of absolute differences; and

summing the plurality of absolute differences to compute the first difference measure.

12. (currently amended) The method of Claim 7, wherein computing a first first-macroblock difference measure for each of a first plurality of first-macroblock pixel blocks in the previous image to form a plurality of first first-macroblock difference measures using the subpattern of pixels comprises:

computing an absolute difference between each pixel in both the first-macroblock pixel block and the predetermined pattern with a corresponding pixel in the first macroblock to create a plurality of absolute differences; and

summing the plurality of absolute differences to compute the first accurate difference measure.

13. (previously presented) The method of Claim 7, further comprising

computing a second first-macroblock difference measure for each of a second plurality of first-macroblock pixel blocks in the previous image to form a plurality of second first-macroblock difference measures using the subpattern of pixels;

selecting a second closest first-macroblock matching pixel block from the second plurality of first-macroblock pixel blocks having a lowest first-macroblock difference measure; and

computing a second accurate first-macroblock difference measure for a second closest first-macroblock matching pixel block using the predetermined pattern of pixels.

14. (previously presented) The method of Claim 13, further comprising:

selecting the first closest first-macroblock matching pixel block as an origin block when the first accurate first-macroblock difference measure is less than or equal to the second accurate first-macroblock difference measure;

selecting the second closest first-macroblock matching pixel block as the origin block when the second accurate first-macroblock difference measure is less the first accurate first-macroblock difference measure; and

computing the motion vector using the origin block and the first macroblock.

- 15. (currently amended) A video encoder configured to determine a first motion vector and a second motion vector for a first macroblock and a second macroblock, respectively, of a present image from a previous image, the video encoder comprising:
 - a frame buffer configured to store the first macroblock, the second macroblock and the previous image;
 - a first first-phase processing unit coupled to the frame buffer and configured to compute a first plurality of first-macroblock difference measures and a first plurality of second-macroblock difference measures using a predetermined pattern of pixels; and
 - a comparator coupled to the first first-phase processing unit and configured to select a first origin block based on the first plurality of first-macroblock difference measures and a second origin block based on the plurality of second-macroblock difference measures.

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- 16. (original) The video encoder of Claim 15, further comprising a cache coupled between the frame buffer and the first first-phase processing unit.
- 17. (previously presented) The video encoder of Claim 15, further comprising a second first-phase processing unit coupled to the frame buffer and configured to compute a second plurality of first-macroblock difference measures and a second plurality of second-macroblock difference measures using the predetermined pattern.
- 18. (original) The video encoder of Claim 15, further comprising a first second-phase processing unit coupled to the first first-phase processing unit and the comparator, wherein the first second-phase comparator is configured to compute a difference measure using a subpattern of pixels.
- 19. (previously presented) The video encoder of Claim 18, further comprising:

second first-phase processing unit coupled to the frame buffer and configured to compute a second plurality of first-macroblock difference measures and a second plurality of second-macroblock difference measures using the predetermined pattern; and

a second second-phase processing unit coupled to the second first-phase processing unit and the comparator, wherein the second second-phase comparator is configured to compute a difference measure using the subpattern of pixels.